

SEQUENCE LISTING

<110> Choi, Eui-Sung  
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Sohn, Jung-Hoon  
Park, Soo-Dong  
Lee, Yoon-Hyoung  
Lee, Seung-Jae  
Jang, Jae-Kweon  
Choi, Seok-Keun  
Son, Young-Rok

<120> VECTOR FOR THE TRANSFORMATION OF PHAFFIA  
RHODOZYMA AND PROCESS OF TRANSFORMATION THEREBY

<130> 118.12-US-WO

<140> 09/830,691  
<141> 2001-04-26

<150> KR 1998/46547  
<151> 1998-10-31

<150> PCT/KR99/00265  
<151> 1999-05-29

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tcgatggaca gatttggaaag acttagccgg tcaaggaact tggggatcac gtggcggagg 180  
actcatcaga agaagtccggg attttgttga tcatagtggg atcaagacaa actggaggat 240  
atggctcgcc ttggaaggga atcccgccg tggattcgag gatccgaaag ttgtacgtat 300  
ggaaaagctt acacggcttg gatttattat ctccatagg aacctactgc aagggttaagg 360  
cttgcagaa gcacacgtaa gtcgcatttc ctctccactc tttcatggca tattgtcaac 420  
gactggacaa cgcgcccggtt ttgaaacaag tgacttaccc ttgaaatgg attctacacc 480  
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acgtttgcgtt ctgtttctgt aggtgaccca gtacaagaag gaaaaggact ccatcttcgc 660  
ccagggaaag cgacgatacg accgaaagca gtcgggttac ggaggtcaga ccaagcccgt 720  
tttccacaag aaggctaaga ccaccaagaa ggtcgccctt cgattggcgg tattttgtt 780  
tattttgaat tcttttgcgtt tatgcagact tttgatgatt atgctccctc gtcgttttt 840  
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cagacatcat aaacagacat cttaacttcgg tggctctct tttttccgc agagtacaag 960  
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ccttttgcgtt tcggatgttg tttctatccg tgggttttc tttctttgg atgcattatc 1140

atttatcggtt ttggactgtt ttcctctgct cgtttcttcc tcctctgtac ttgtgcttct 1200  
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<222> (30) ... (347)

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1 5

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Arg Thr Tyr Cys Lys Gly Lys Ala Cys Lys Lys His Thr Pro His Lys  
10 15 20

gtg acc cag tac aag aag gga aag gac tcc atc ttc gcc cag gga aag 149  
Val Thr Gln Tyr Lys Lys Gly Lys Asp Ser Ile Phe Ala Gln Gly Lys  
25 30 35 40

cga cga tac gac cga aag cag tcc ggt tac gga ggt cag acc aag ccc 197  
Arg Arg Tyr Asp Arg Lys Gln Ser Gly Tyr Gly Gln Thr Lys Pro  
45 50 55

gtt ttc cac aag aag gct aag acc acc aag aag gtc gtc ctt cga ttg 245  
Val Phe His Lys Lys Ala Lys Thr Thr Lys Lys Val Val Leu Arg Leu  
60 65 70

gag tgc tcc gtc tgc aag tac aag atg cag atg acc ctc aag cga tgc 293  
Glu Cys Ser Val Cys Lys Tyr Lys Met Gln Met Thr Leu Lys Arg Cys  
75 80 85

aag cac ttc gag ctt gga gga gac aag acc aag gga gcc gcc atc 341  
Lys His Phe Glu Leu Gly Gly Asp Lys Lys Thr Lys Gly Ala Ala Ile  
90 95 100

tct ttc taa 350  
Ser Phe  
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<210> 3  
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<212> PRT  
<213> Phaffia rhodozyma

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Cys Lys Lys His Thr Pro His Lys Val Thr Gln Tyr Lys Lys Gly Lys  
20 25 30  
Asp Ser Ile Phe Ala Gln Gly Lys Arg Arg Tyr Asp Arg Lys Gln Ser

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Gly	Tyr	Gly	Gly	Gln	Thr	Lys	Pro	Val	Phe	His	Lys	Lys	Ala	Lys	Thr
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Thr	Lys	Lys	Val	Val	Leu	Arg	Leu	Glu	Cys	Ser	Val	Cys	Lys	Tyr	Lys
65					70				75				80		
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 <213> Phaffia rhodozyma

<220>  
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 gattgatcaa catgccagca cgtccctccgg gacggagact ggcggggatc gtacccatc 240  
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 gttcgcctgc cgaagactgt gtgagtgtgc tganaactaa ttgagttaccg ggggataagg 360  
 caaggcgtgt ntggttgccc gtggctgtga gcgagtttgc tgcaaagcga ttcaatgcac 420  
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 gagggaaaacg ttctgtggcc ctctcctctg tggatagttt cctgggttgc cctggccagta 600  
 gtcatatgtct tgcataatggg attaagccat gcatgtctaa gtataaacaattcataactg 660  
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<210> 5  
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 <213> Artificial Sequence

<220>  
 <223> CYH1, a PCR primer for the cloning of L41 genomic  
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<221> misc\_feature  
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 <223> n=a, t, c, or g

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23

<210> 6  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
<223> CYH3, a PCR primer for the cloning of L41 genomic  
DNA fragment

<400> 6  
cccggttytt ggcyyttr tgraa 25

<210> 7  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 3' RACE primer

<400> 7  
ggtcagacca agcaagtttt tcac 24

<210> 8  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 5' RACE primer

<400> 8  
gtgaaaaact tgcttggtct gacc 24

<210> 9  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> sense primer for the mutagenesis of L41 gene

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<210> 10  
<211> 24  
<212> DNA  
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<220>  
<223> antisense primer for the mutagenesis of L41 gene

<400> 10  
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<210> 11  
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<223> a PCR primer corresponding to 18S rDNA

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<210> 12

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> a PCR primer corresponding to 18S rDNA

<400> 12

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20

<210> 13

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> a PCR primer corresponding to 28S rDNA

<400> 13

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<210> 14

<211> 20

<212> DNA

<213> Artificial Sequence

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<223> a PCR primer corresponding to 28S rDNA

<400> 14

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<210> 15

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<213> Phaffia rhodozyma

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atctcaattt ttcaaatact tgccaaactt ttcatatatttata cacacaaaaa aaagtcatgat 180

tggcccacaa agtcagatac acgctcgatc gtcgacgggt tcaaggactt ttgtcaggcga 240

aagaaaaggcc acagcaccac ccttcaagtc tcgtctcaat cagggtcgatc tagcttttg 300

tgtgcaagga ttaccgtct tgatggattt gttcgttgaa agagaggaaa gaacatgtcg 360

aactgacgaa agtgtgaaca aaaaattgtg attttttcat tttgtttcgcc tggtctccctt 420

gctgggttgg gttggatcgat atttatcttc ttgtgttgat ggaaaaaccctt gaatgttctt 480

ttcttggaca tcttctaaac tcgacaaaac gattcattcc tccgtactgc tctgggtctg 540

ccttttgaa tcgcatcgat aaattcttcc ctcggacgt tcgatcaatc tccgtcaaac 600

ttatcatcca aaaatctttt ctgcactgcc gccttgcctt ttttcttcgt tctttccctt 660

atccgcttc gactaccctc cttctttca cactcatagt caagatggtc aacgtcccca 720

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<212> PRT  
<213> Phaff

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Asp Ser Ile Phe Ala Gln Gly Lys Arg Arg Tyr Asp Arg Lys Gln Ser
      35          40          45
Gly Tyr Gly Gly Gln Thr Lys Pro Val Phe His Lys Lys Ala Lys Thr
      50          55          60
Thr Lys Lys Val Val Leu Arg Leu Glu Cys Ser Val Cys Lys Tyr Lys
      65          70          75          80
Met Gln Met Thr Leu Lys Arg Cys Lys His Phe Glu Leu Gly Gly Asp
      85          90          95
Lys Lys Thr Lys Gly Ala Ala Ile Ser Phe
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<210> 17  
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<210> 18  
<211> 6

<212> PRT  
<213> Phaffia rhodozyma

<400> 18  
Thr Lys Pro Val Phe His  
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<210> 19  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> mutation

<400> 19  
accaagcaag tttttcac 18

<210> 20  
<211> 6  
<212> PRT  
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<220>  
<223> mutation

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Thr Lys Gln Val Phe His  
1 5